What is claimed:

[0041] 1. A printed circuit board (PCB), comprising:

a mounting area for attaching one or more heat producing devices; and

a coolant circulation channel at least partially formed in a layer of the PCB, the channel having a portion in a vicinity of the mounting area.

[0042] 2. The PCB of claim 1, wherein the PCB is a multi-layer PCB, and wherein a portion of the channel is formed by removal of portions of one or more layers of the PCB.

[0043] 3. The PCB of claim 1, wherein the PCB is a multi-layer PCB, and wherein a portion of the channel is formed by coinciding vias in located in adjacent layers of the PCB.

[0044] 4. The PCB of claim 1, wherein the channel carries a coolant.

[0045] 5. The PCB of claim 4, wherein the coolant is a gas.

[0046] 6. The PCB of claim 4, wherein the coolant is a liquid.

[0047] 7. The PCB of claim 4, wherein a portion of the channel is formed by a surface of a device attached to the mounting area, so as to provide direct contact between the device and the coolant.

[0048] 8. The PCB of claim 7, wherein the device comprises a transistor die attached to a mounting flange, the mounting flange attached to the mounting area and comprising the surface forming the respective portion of the channel.

[0049] 9. The PCB of claim 1, wherein the device comprises a transistor die attached to the mounting area.

[0050] 10. The PCB of claim 7, wherein the device comprises a transistor die attached to the mounting area, the transistor die comprising the surface forming the respective portion of the channel.

[0051] 11. The PCB of claim 1, comprising a plurality of device mounting areas for attaching heat producing devices, the channel having a portion in a vicinity of each mounting area.

[0052] 12. An assembly comprising a heat-generating device attached to a printed circuit board (PCB), and a thermal management system, the thermal management system comprising a coolant circulation channel at least partially formed in a layer of the PCB.

[0053] 13. The assembly of claim 12, further comprising a heat sink, the channel including a portion in thermal contact with the heat sink.

[0054] 14. The assembly of claim 12, further comprising a pump arranged for circulating a coolant through the channel.

[0055] 15. The assembly of claim 12, wherein the PCB is a multi-layer PCB, and wherein a portion of the channel is formed by removal of portions of one or more layers of the PCB.

[0056] 16. The assembly of claim 12, wherein the PCB is a multi-layer PCB, and wherein a portion of the channel is formed by coinciding vias located in adjacent layers of the PCB.

[0057] 17. The assembly of claim 12, wherein the channel carries a gas coolant.

[0058] 18. The assembly of claim 12, wherein the channel carries a liquid coolant.

[0059] 19. The assembly of claim 12, wherein a portion of the channel is formed by a surface of the device, so as to provide direct contact between the device and a coolant carried in the channel.

[0060] 20. The assembly of claim 19, wherein the device comprises a transistor die attached to a mounting flange, the mounting flange attached to the PCB mounting area and comprising the surface forming the respective portion of the channel.

[0061] 21. The assembly of claim 12, wherein the device comprises a transistor die attached to the PCB mounting area.

[0062] 22. The assembly of claim 19, wherein the device comprises a transistor die attached to the PCB mounting area, the transistor die comprising the surface forming the respective portion of the channel.

[0063] 23. The assembly of claim 12, the PCB comprising a plurality of device mounting areas for attaching heat producing devices, the cooling channel having a portion in a vicinity of each mounting area.